

Historic, Archive Document

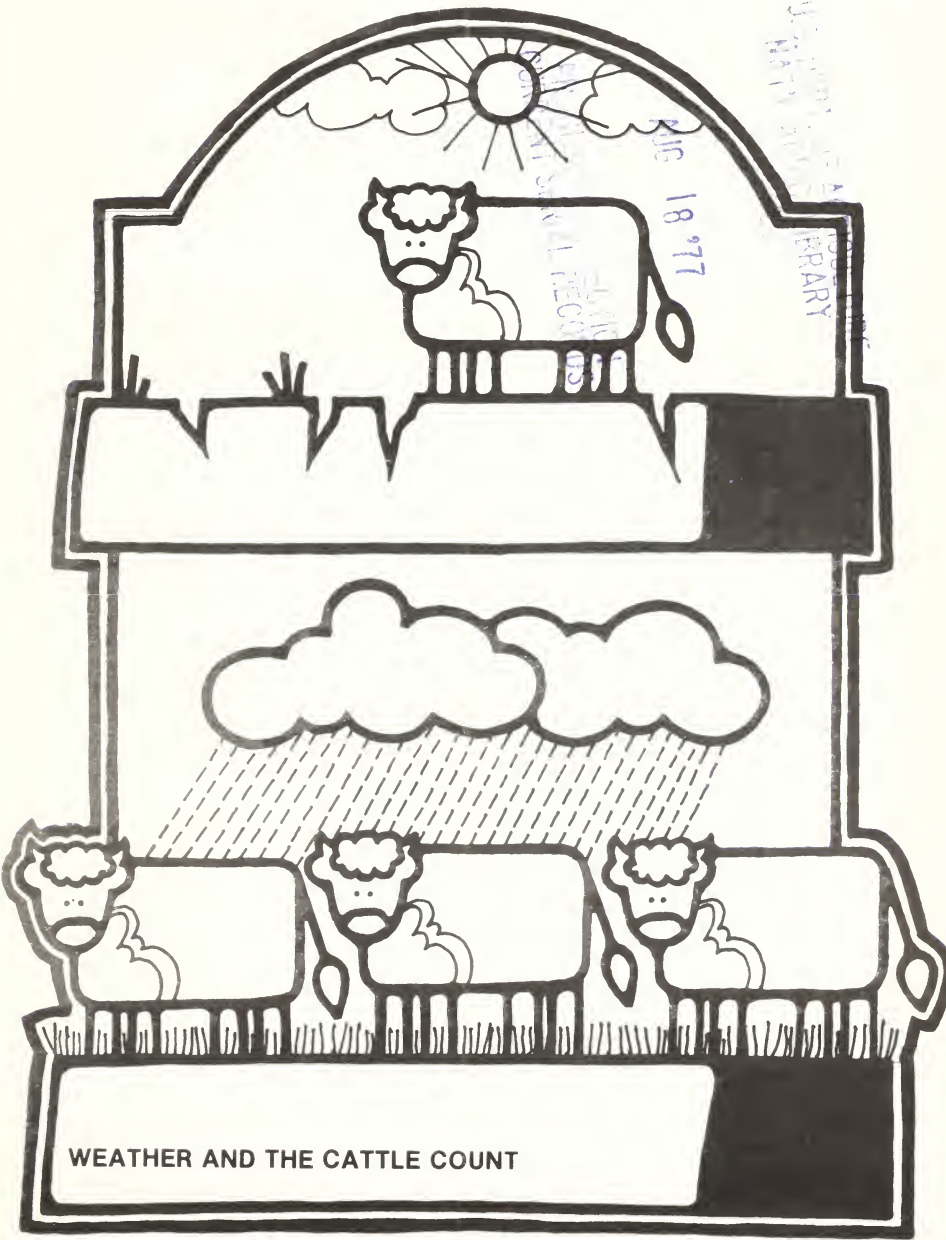
Do not assume content reflects current scientific knowledge, policies, or practices.

1
EE 7A9

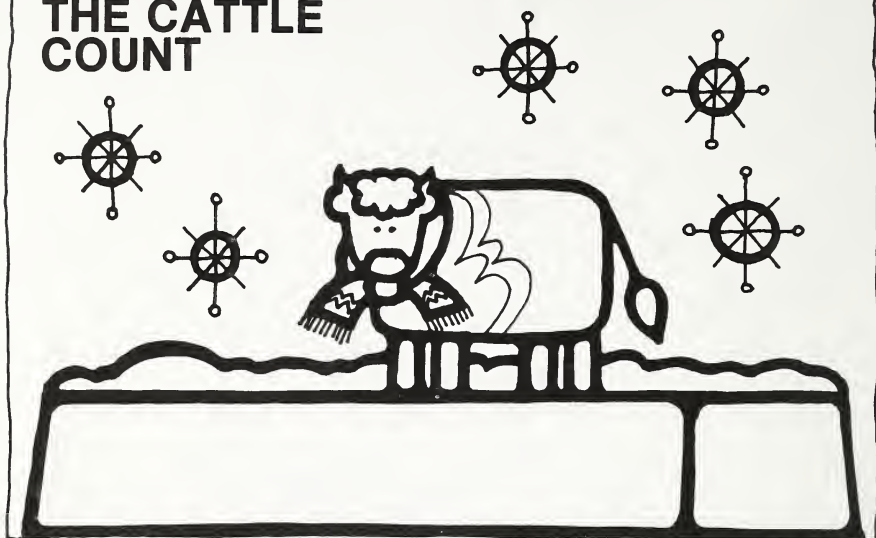
Copy 4

agricultural situation

THE CROP REPORTERS MAGAZINE • JUNE 1977
U.S. DEPARTMENT OF AGRICULTURE • STATISTICAL REPORTING SERVICE



WEATHER AND THE CATTLE COUNT



Weather could have a big say-so in what direction the U.S. cattle industry heads over the next few years.

Favorable weather through 1980 could bring better times for many of our financially troubled cattle producers, while persistent drought and generally poor weather might create a discouraging situation for both producers and consumers.

During the past fall and winter, dry and near-drought conditions plagued large areas of the Central and Western United States, hitting some States harder than others and exacting a wide range of damage on their beef herds.

South Dakota, for example, had a 27-percent reduction in its beef cow herd during 1976, with weather shouldering much of the blame. On the other hand, Nebraska producers ended the year with only 3 percent fewer beef cows.

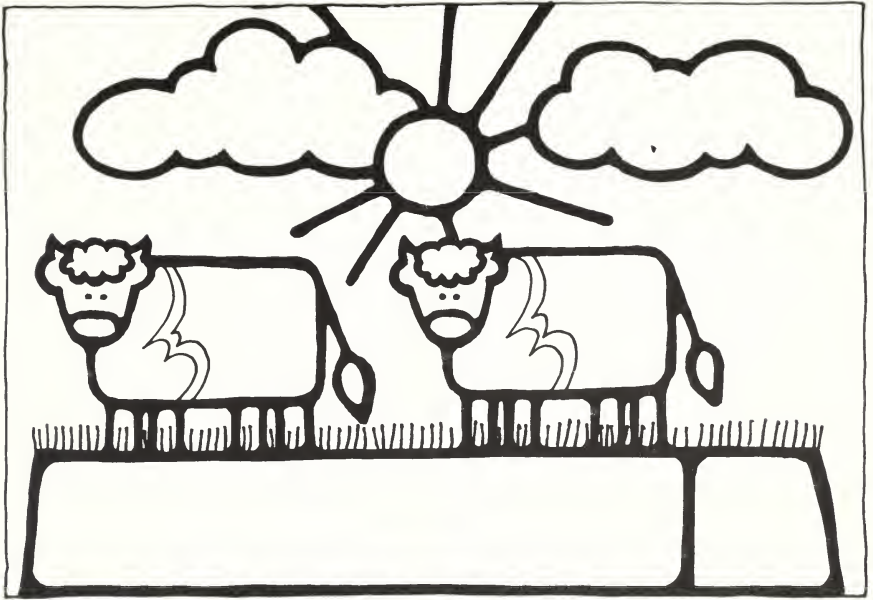
Meantime, cattle producers in the Eastern States faced a serious but somewhat different problem. Bitter-

ly cold weather that gripped the East resulted in poor weight gains in many herds, while in some cases, cattle even lost weight.

In the Southeastern States, cold prevented normal growth of grasses and fall seeded pastures that normally supply winter grazing. Producers then had to turn to supplemental feeds.

Compounding the problem for southeastern producers were hefty feed prices and a shortage of hay. Together, the cold weather, poor feeding conditions, and high cost of purchased roughages caused many herds to come through the winter in poor condition.

Weather problems like these have further influenced cattlemen, already burdened by record numbers of cattle and strapped by heavy financial losses, to reduce their herds. The current liquidation phase of the cattle cycle began 2 years ago, when, after the longest period of expansion in the industry's history, the cattle count on



January 1, 1975, reached an alltime high of nearly 132 million head. By this past January, producers had trimmed the Nation's cattle herd down to 123 million head.

Of growing concern, however, is the rapid *pace* of the present liquidation phase. The question is, when will it bottom out . . . and will that happen before cattlemen cut back too far?

Right now, USDA livestock economists expect herd liquidation to continue throughout this year and into the next. But just how long producers continue to work down their inventories depends largely on how long drought conditions keep recurring and how long cattlemen who have endured big financial losses can "hold on."

The economists developed two scenarios that explore the course of the cattle cycle from 1977 through 1980. These alternatives provide a look at how the cattle industry might react under sharply different weather conditions. Economists

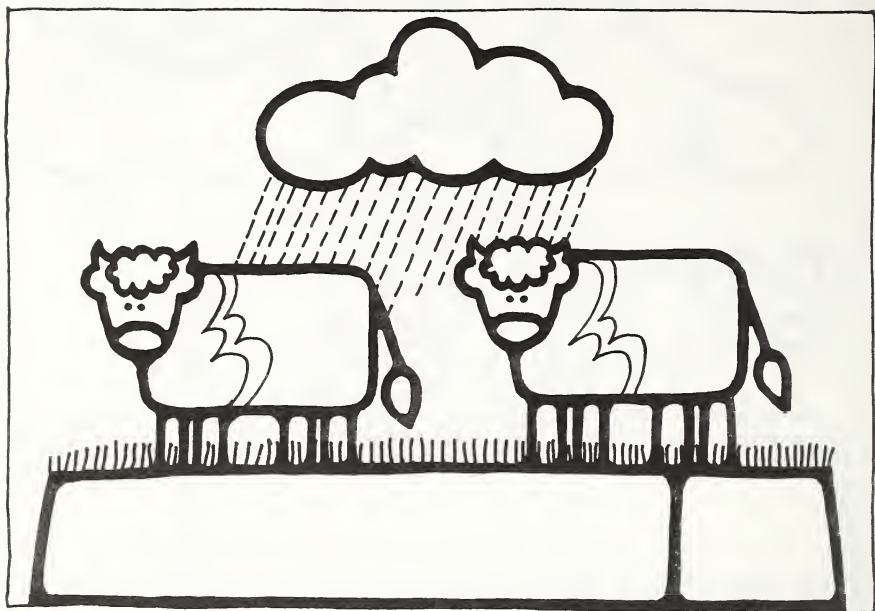
caution, though, that these are only two samples out of many situations that could unfold between now and the end of the decade.

Alternative A—Favorable Weather.

This possibility assumes improved moisture conditions that would support the present herd size in all areas of the country. It also assumes adequate feed grain supplies and more favorable livestock-feed price ratios than in the past year.

Under these conditions, the current rate of herd reduction and cattle slaughter would moderate in 1977 and bottom out in 1978. Also, improved grazing conditions and grain supplies should help foster a financially healthier cattle industry than in the past few years.

Last year, for the first time in modern history, there were more cattle slaughtered than there were calves added to the U.S. herd, which proved a key factor in 1976's large inventory reduction. That situation would not happen again this year



under Alternative A, since cattle slaughter would ease up. In 1978, the calf crop would about match slaughter and death loss; therefore, the cattle herd would level off at about 120 million head by 1979.

Under Alternative A, per capita beef production would probably taper off through the end of the decade, with output in 1980 some 10 - 14 percent below last year's figure. With a growing economy and strong demand for beef, prices for live animals and consumer beef prices would probably turn higher—but not as high as under poorer weather and pasture conditions.

Alternative B—Continuing Drought.

This possibility assumes poor growing conditions for forages and grains this year and in early 1978, followed by favorable conditions through 1980. Poor weather and short feed grain supplies would cause herd reduction to continue at a rapid clip, possibly not easing up until 1979.

Such a situation could come about if drought in the West persists and spreads eastward this summer. With the prospect of soaring feed costs, financially strapped cattlemen would have little alternative but to reduce their herds.

Alternative B ultimately could lead to conditions that neither producers nor consumers would like to see. While per capita beef production would hold up well this year and next, it would fall off sharply in 1979 and 1980 as the rebuilding phase of the cattle cycle begins anew. By 1980, beef production per person could slip by more than 20 percent below last year's level.

Short beef supplies following the initial heavy liquidation could push consumer beef prices so high that shoppers would turn to other kinds of meats. Meantime, high cattle prices could trigger overexpansion in the cattle industry, and producers would again face the same burdensome supplies—and dwindling prices—as in the past several years.

FEWER FARM PEOPLE

Last year, only around one of every 26 Americans lived on a farm.

In a recent report issued jointly with the Census Bureau, USDA's Economic Research Service says that about 600,000 fewer people lived on farms in 1976 than in 1975, pushing the farm population to an alltime low of 8.3 million.

The report cautions, however, that the 1976 figures are based on a new way of processing survey responses to account for missing data, and that up to 100,000 of the decline may be due to the new procedures.

Even so, the figures verify that the U.S. farm population continues to wane—as it has since the mid-1930's when farms began growing larger and more mechanized. Back in 1935, a farm was home to roughly one of every four Americans.

This steady decline in farm dwellers runs counter to current developments in the rural population as a whole. From 1970 to 1975, the number of people living on farms dwindled by nearly 850,000. Mean-

time, the rural and small town population swelled by around 3½ million people.

Growth of job opportunities in rural areas, increased commuting to urban employment, and an influx of retired people best explain this simultaneous rush to America's heartlands but away from its farms.

The over half a million people that disappeared from the farm population between 1975 and 1976 represent a decline of 7 percent, and indicate that the exodus from American farms may be accelerating. Since 1970, the number of farm residents had been trickling off at an annual rate of only 2.7 percent.

During that same period, blacks left farms at a faster rate than whites. In 1970, some 900,000 blacks lived on U.S. farms, but by last year roughly 500,000 were left. That works out to an annual decline of 9.2 percent—versus only 2.2 percent for white farm residents.

Also down sharply: children on farms. Due mainly to a declining birth rate, the number of farm residents under 14 years old has shrunk by a third since 1970.

OUR SHRINKING FARM SECTOR

Year	Total resident population	Farm population	
		Number of people ¹	Percent of total population
- - - Thousands - - -			
1970	203,235	9,712	4.8
1971	205,677	9,425	4.6
1972	207,802	9,610	4.6
1973	209,468	9,472	4.5
1974	211,018	9,264	4.4
1975	212,538	8,864	4.2
1976	214,280	8,253	3.9

¹Five-quarter averages centered on April.

SPARE THE BEES

Farmers have a friend in the bee. Scientists are working hard to maintain that friendship.

Cotton growers, for example, rely more and more on bees to pollinate their plants, especially since high U.S. labor costs have virtually ruled out pollination by hand.

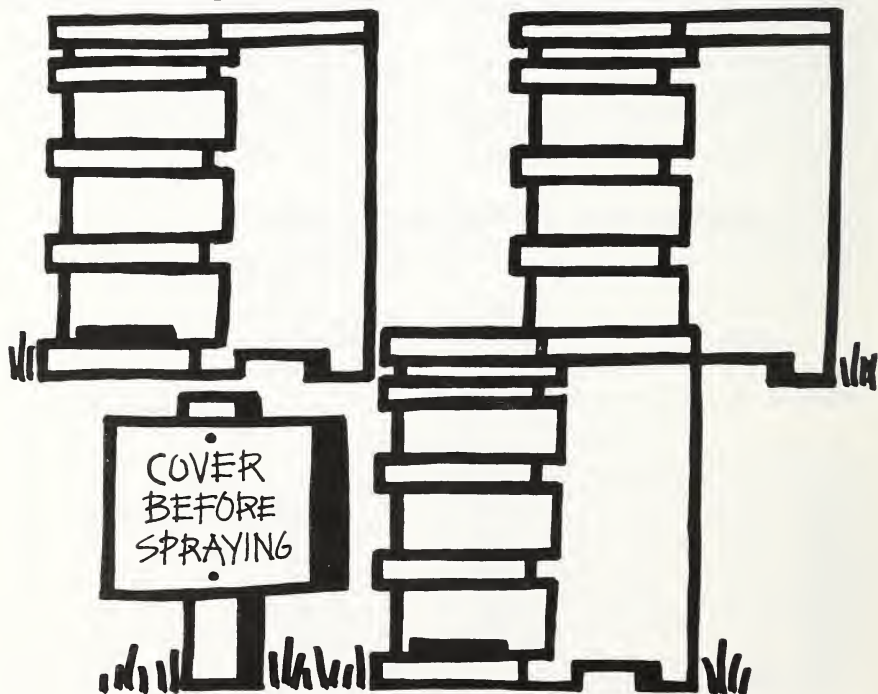
Unfortunately, when insects invade cotton and other crops, farmers must retaliate with insecticides that can be as deadly to bees as the unwanted intruders. In Arizona's Salt River Valley, where cotton is often sprayed 15 or more times a year for 5- to 7-day intervals, bee colonies declined by more than 50 percent over an 8-year period.

Since plants must be sprayed frequently, it's impractical to move the hives. USDA's Agricultural Research Service's bee research laboratories in Tucson, Ariz., and Laramie, Wyo., therefore have developed a way to protect the bees before and after spraying.

Scientists tested 16 separate treatments using 10 colonies per test on a 480-acre cotton field. The most effective was a six-way combination using burlap covering, pollen feeding, shade, a top waterer, bottom board, and sirup.

The burlap covering confines the bees to the hive until 12 hours after the insecticide application while the pollen and water sustain them during confinement. The shade keeps them out of the hot sun and the bottom board, which gives bees additional room at the base of the hive, provides a clustering space for field bees at night and during heat waves and confinement.

After five insecticide applications over 1½ months, bees given this treatment survived and even gained weight. Other treatments failed to prevent heavy bee losses except those using burlap—where the colonies survived but lost weight through the ordeal.



COFFEE HABIT LOSES STRENGTH

Coffee drinking is an American way of life. People here consume more coffee on a total basis than those in any other country.

Yet a nagging worry pervades the industry: per capita consumption of the beverage has declined alarmingly since World War II.

In 1946, Americans over 15 years of age drank regular coffee at a rate of 26.9 pounds per person (green bean equivalent). By 1975, that figure had dipped to 16.2 pounds.

USDA's Foreign Agricultural Service identified two possible causes—beyond traditional income and price factors—for the decline. One was the introduction of the less expensive African Robusta bean into American blends, which unfortunately, compared with some Latin American varieties, imparts a bitter flavor with limited appeal.

Secondly, a major change in American lifestyles had evolved. Higher disposable incomes, more travel, and increased outdoor activity encouraged snacks and cold drinks in place of full meals with coffee. Rapid growth in the soft drink industry resulted.

Experts attribute the initial postwar drop in per capita coffee drinking to rapidly rising prices that peaked in 1954. A somewhat stagnant situation followed through 1962, as price fluctuations probably overshadowed consumer reaction to the Robusta bean's bitter taste.

But data show that by 1962, prices had leveled off to a range that would be maintained over the next several years, which allowed the Robusta factor and the change in American lifestyles to push consumption of regular coffee to new lows through 1974. Indications now are that the stiff price increases of recent months will further lower consumption about a pound per person in 1977.

Meantime, a continuing dilemma

facing coffee sellers is how to develop and maintain new markets. Although consumption dropped in all age groups from 1962 to 1974, older people proved a better market while younger consumers failed to materialize in their former numbers. These young consumers may never be recovered and could continue to lower per capita coffee consumption for an entire generation.

There's little the coffee industry can do to reverse the influence of new lifestyles on the Nation's coffee-drinking habits. But by blending less Robusta in American brews, manufacturers might prevent further losses and cultivate new consumers.

Past experience supports this tactic: In 1975, poor weather and political difficulties greatly reduced the flow of Robusta beans into the United States. That same year, per capita use of regular coffee turned sharply higher.

DAIRY TALLIES

Milk produced in the United States last year was worth a record \$11.43 billion to the Nation's dairy-men, as cash receipts shot up 15 percent over the previous high the year before.

Stepped-up marketings and higher milk prices accounted for the record returns, with producers realizing \$9.74 per hundred-weight—90 cents more than in 1975—on combined sales of milk and cream.

At a little over 120 billion pounds, production reached its highest level since 1965. Plants and dealers bought 115.5 billion pounds, while direct sales to consumers pushed total milk and cream marketings to 117.3 billion pounds.

The remaining 3.1 billion never left the farm. Roughly half went to calves and the remainder supplied milk, butter, and cream for dairy-men's tables.

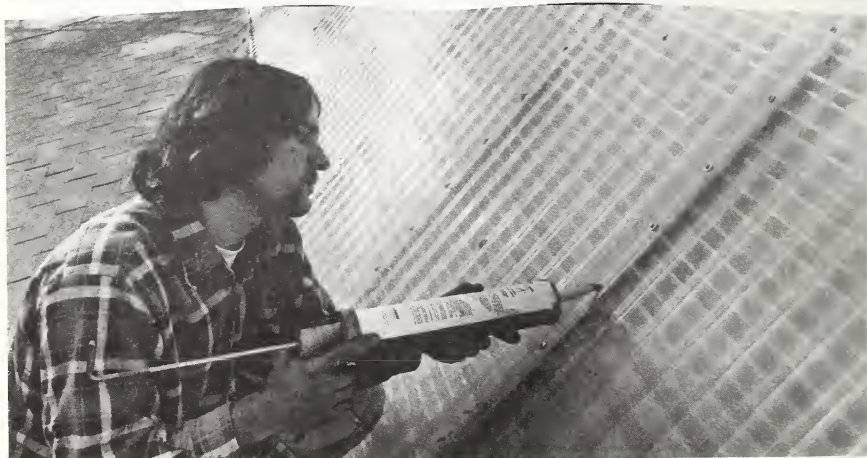
SOLAR HOUSE A SHINING SUCCESS

Designers of a solar house in Greenville, S.C., got a pleasant surprise when their experimental home used energy more efficiently than expected.

Limited tests on the medium-priced 3-bedroom family unit showed that the attic's heat collector gathered 59 percent of the solar energy available during clear days in January. Generally, experts consider a solar collector efficient if it

captures as much as 50 percent of the available energy.

The prototype house, designed by the Agricultural Research Service's Rural Housing Research Unit in Clemson, S.C., boasts a simple heating and cooling system. Two layers of translucent fiberglass that replace conventional materials on the south slope of the building's roof allow sunshine to enter the attic, where it's absorbed by a black



plywood floor. This heats the air in the attic.

A fan then circulates the warm attic air to heat the house and the 12-inch layer of crushed rock beneath it. The rock serves as a storage tank that's capable of holding a 3-day supply of heat to warm the house at night and during rainy weather.

Except for its heat-collecting attic and the crushed rock below its base, the solar house is conventional in all other respects. Scientists estimate heating costs at just under 7 cents a

kilowatt-hour, a fee that includes average heat load, an initial outlay of \$2,635, payments over 20 years at 8½ percent interest, and a 2-percent operation, maintenance, and repair cost.

Scientists are now working on plans that will eventually reduce both the overall cost of the system and the monthly operating cost. With several modifications, the cost of solar energy, including fees for operation, maintenance, and repair, should not exceed \$100 a year.



Above: Pale wintry sun glints on solar house, passing through heat collectors on south roof. *Opposite:* Workers install insulation and check the air distribution system,

located where a furnace would be in a conventional house. Finishing touches include caulking the translucent fiberglass panels, which cover 365 square feet.

SURVEYSCOPE

To give our readers a clearer picture of the vast scope of SRS activities, Agricultural Situation presents a series of articles on special surveys undertaken in various States. While these are not national surveys, they are important to the agriculture in individual States.

"Citrus production in Texas can be extremely volatile," says Will Walther, State agricultural statistician.

"Over the years, freezing weather has periodically damaged the citrus trees, causing sharp declines in production. While we can't predict these sizable drops caused by weather, we *can* alert growers and other industry members to expected production levels based on the amount of land devoted to citrus and the number of trees by ages and varieties."

That's why, at the request of the

Texas citrus industry, Walther's office made a special citrus tree inventory survey last December and January. Funded by the Texas Department of Agriculture, the survey spanned three major producing counties at the southern tip of the State.

"Survey work actually began in October 1976," explains Walther. "That's when USDA's Agricultural Research Service made aerial photographs of the entire citrus area in the three counties. We outlined all areas on the photos that appeared to be citrus groves, and used a special



Fungicide sprayer sweeps through citrus grove, familiar sight at Texas' southern tip . . .

measuring device to determine their acreage."

A sample of these groves was selected at random to be personally visited by survey enumerators. As a check against any groves that may have been overlooked on the aerial photos, Walther's office identified 500 random points to be visited as well. Trips to these spots later in the survey turned up only one citrus grove that had not been identified in the photos.

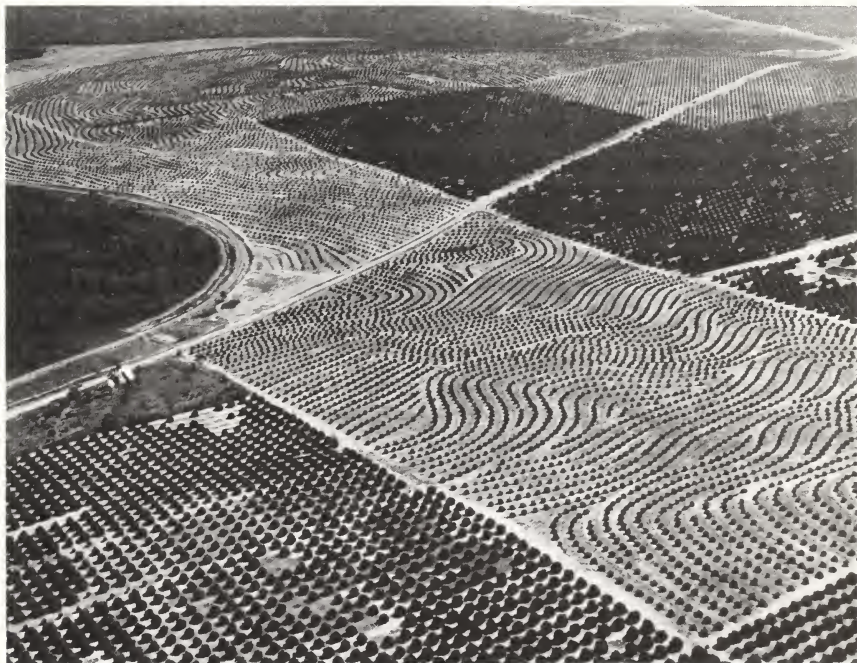
Most enumerators were university students from the citrus area who trained for the survey in mid-December and then used their semester breaks to visit groves and interview citrus producers. The students completed the fieldwork by February 1.

Survey results showed that as of January 1, 1977, Texas had 74,200 acres of commercial citrus groves containing 50 trees or more. Enumerators excluded from this tally all land used for canals, roads, and ditches within and bordering the groves.

Since the last citrus inventory in January 1975, net commercial citrus acreage had declined by less than half a percent. But new plantings with more trees per acre pushed tree numbers up 4 percent to 8.4 million. Hidalgo County continued as the State's top producing area, with roughly 84 percent of the trees and acreage.

Grapefruit dominates the Texas citrus industry, and at 45,000 acres, the land planted in grapefruit at the start of this year stood 6 percent over 1975 and represented just over three-fifths of all citrus acreage in the State. Grapefruit trees numbered 5.2 million, up 14 percent from 1975.

Meantime, orange acreage dropped back 9 percent to 28,600 acres. The 2 years also saw a substantial drop in acreage planted to early and midseason oranges and a hefty increase in Valencias. Lemons, limes, tangelos, and tangerines took up only around 600 acres, or about 1 percent of the State's total citrus area.



... where a citrus tree inventory survey found 73,600 acres in grapefruit and oranges.

Briefings

RECENT REPORTS BY USDA OF ECONOMIC, MARKETING, AND RESEARCH DEVELOPMENTS AFFECTING FARMERS.

SAVING THE SOIL. . . Quick-growing grasses may provide temporary protection against soil erosion on newly graded sites. USDA's Agricultural Research Service has scientists working on the capabilities of various grasses to hold soil in place until permanent vegetation takes over. Besides preventing erosion damage to the construction sites themselves, the fast-growing grasses can also help the Nation's waterways by stopping the erosion that contributes to sedimentation, today's most serious water pollution problem. The type of annual grass used would depend on the site and season; wheat and sudangrass stand out as likely prospects. Sudangrass can provide protection within 10 days after seeding.

DISAPPOINTING YEAR. . . USDA's Foreign Agricultural Service reports that last year, U.S. exports of beef breeding stock stood at their lowest level in 12 years. Shipments of beef cattle for breeding peaked in 1974 at roughly 42,000 head, but then fell off sharply to only 10,370 animals in calendar year 1976. Besides facing a depressed world market and global recession, U.S. exporters also were affected by stiffer import regulations in Mexico and devaluation of the peso. In South Africa, the exporters ran up against a temporary ban on the issuance of livestock import permits, and in Canada, they coped with continuing problems with Canadian requirements for bluetongue disease.

TRACKING DOWN PSEUDORABIES. . . Two universities and the National Animal Disease Center (NADC), Ames, Iowa, were granted additional funds to expand their studies of pseudorabies, a herpes virus that attacks swine herds. Purdue, Iowa State, and the NADC will receive another \$60,000 in contingency reserve funds—used only for emergencies and other urgent problems—from USDA's Agricultural Research Service. Besides causing death losses up to 100% in pigs less than 2 weeks old, pseudorabies, sometimes known as Aujeszky's disease or "mad itch," also can affect cattle and sheep. Outbreaks of pseudorabies have increased from a 1974 total of 125 herds in 13 States to more than 700 herds in 22 States last year.

DETECTING PLANT PESTS. . . "Project Pest Alert" intends to make it difficult for many invading plant pests. This new early warning system will establish a 100-mile detection belt around 16 major ports of entry that might offer footholds to foreign plant pests. USDA's Animal and Plant Health Inspection Service (APHIS) will survey about 1,000 locations at each port to uncover any invaders that may enter. The program will concentrate on insects, nematodes, snails, and slugs that attack vegetables, grains, and citrus. This project will back up APHIS' port operations that included more than 100 million inspections of incoming vehicles, freight, and baggage last year. There are plans to expand "Project Pest Alert" to 39 entrance points within 3 years.

TOWARD FEWER LIVESTOCK PROBLEMS. . . Grants by USDA's Cooperative State Research Service will enable researchers at four universities to tackle problems in beef and pork production. At Iowa State University and the Universities of Nebraska and Missouri, the funds will be used to study factors that affect reproductive rates of hogs in confinement housing. Despite general agreement that confinement housing lowers the reproductive efficiency of swine, there's been little research to find out why. Meantime, scientists at the University of Minnesota and Iowa State will examine the role of cells in the ability of cattle to resist respiratory disease and viral infection.

WORLD WOOL WANES. . . After dropping slightly last year to an estimated 2.5 million metric tons, world wool output is expected to decline again this year, says USDA's Foreign Agricultural Service. The decline in production follows a sharp upturn in wool use during 1975, attributed to general economic recovery and a swing back to natural fibers. While use of virgin wool tapered off in 1976 and may decline further this year, fashion trends indicate that wool should hold its own against other fibers on the world market. Almost 90% of all exported wool originates in five countries: Australia, New Zealand, Argentina, South Africa, and Uruguay.

COTTON CUSTOMERS. . . Southern Europe looks to be a strong outlet for U.S. cotton in the marketing year that begins on August 1. If American supplies are ample, says USDA's Foreign Agricultural Service, our share of the Spanish and Portuguese markets should turn higher in 1977/78, with Spain possibly emerging as the top European buyer. Italian takings are expected to maintain their improved level of last season, and Greece will continue to import good quality U.S. cotton despite some reduction if the country resumes normal trade relations with Turkey.

SPICING IT UP. . . U.S. imports of specified spices and flavoring materials jumped to a record \$150.5 million last year. According to USDA's Foreign Agricultural Service, this represented an increase of more than \$10 million from 1975 imports. The outlook for U.S. spice use looks favorable for 1977, with imports again expected at high levels. However, world production has lagged rising consumption in recent years resulting in fairly stiff prices for many items. Bad weather in Europe last year also added to tight supplies and higher prices.

COFFEE CROP CLIMBS. . . USDA's Foreign Agricultural Service (FAS) has made its first 1977/78 Brazilian coffee forecast: It's an optimistic one. FAS expects a 79% leap to 17 million bags, up from the 9.5 million bags labeled for the 1976/77 harvest. Although the latest figures fall short of production before the 1975 frost, information gathered by USDA officials points to recovery to pre-frost levels by the 1979/80 crop. Output stood at 25.2 million bags 2 years before the frost damage.

SOIL EROSION PROBLEM WON'T BLOW AWAY. . . USDA's Soil Conservation Service (SCS) is making an inventory in cooperation with Iowa State University to determine the extent of soil erosion. High speed computers will be used to evaluate data on water and wind erosion damage gathered in the 50 States, Puerto Rico, and the Virgin Islands. SCS will visit 72,500 nonfederal rural and urban sample sites by November 1 to examine 20 study factors that include kind of soil, slope, climate, crop sequence, and conservation measures. Calculations will be made on a statewide, regional, and national basis to find soil erosion rates and sediment yields. This inventory also will provide information on soil and water conservation needs, prime farmland, potential cropland, water quality, and land use. Next year, the study will be expanded to include gully, streambank, roadside, and construction erosion. State-by-State data will be available May 1, 1978; sediment yields will be completed in mid-1979.

. . . ONLY THE SOIL WILL. . . Field windbreak studies in five Great Plains States will be completed next year, says USDA's Soil Conservation Service. A field windbreak is one or more rows of trees planted across farmland to keep soil from blowing away and to provide a home for wildlife. Comparisons will be made of aerial photographs taken over recent 5-year periods in Kansas, Nebraska, North Dakota, Oklahoma, and South Dakota, which contain three-fourths of the windbreaks in the Plains States. SCS field personnel also will help determine reasons for windbreak removal. Iowa State University will select the sample locations. The study follows a General Accounting Office report that discouraged windbreak removal.

Statistical Barometer

Item	1975	1976	1977—latest available data	
Farm Food Market Basket:¹				
Retail cost (1967=100)	174	175	178	March
Farm value (1967=100)	187	179	178	March
Farmer's share of retail cost (percent)	42	40	39	March
Agricultural Trade:				
Agricultural exports (\$bil.)	22	23	2.3	March
Agricultural imports (\$bil.)	10	11	1.3	March
Farm Income:				
Volume of farm marketings (1967=100)	116	121	97	March
Cash receipts from farm marketings (\$bil.)	89.6	94.8	² 95.9	
Realized gross farm income (\$bil.)	98.2	104.2	² 105.6	
Production expenses (\$bil.)	75.5	80.9	² 83.1	
Realized net farm income (\$bil.)	22.7	23.3	² 22.5	
Income and Spending:				
Disposable personal income (\$bil.)	1,080.9	1,181.7	² 1,245.8	
Expenditures for food (\$bil.)	184.8	198.7	² 208.8	
Prices:				
Consumer price index, all items (1967=100)	161.2	170.5	178.2	March
Food (1967=100)	175.4	180.8	188.6	March
Food away from home (1967=100)	174.3	186.1	195.2	March
Food at home (1967=100)	175.8	179.5	186.9	March
Meats ³	177.9	178.2	170.8	March
Beef and veal	170.0	164.5	160.7	March
Pork	196.9	199.5	184.1	March
Poultry	162.4	155.7	158.3	March
Fish	203.3	227.3	241.5	March
Eggs	157.8	172.4	179.5	March
Dairy products ⁴	156.6	169.3	171.2	March
Fats and oils ⁵	198.6	173.7	180.7	March

¹Average annual quantities per family and single person households bought by wage and clerical workers, 1960-61, based on Bureau of Labor Statistics figures.

²Annual rate, seasonally adjusted, first quarter.

³Beef, veal, lamb, mutton, pork, and processed meat.

⁴Includes butter.

⁵Excludes butter.



Crop
Reporting
Board

AGRICULTURAL SITUATION

JUNE 1977 • VOL. 61 NO. 5
DIANE DECKER, EDITOR

The Agricultural Situation, published 11 times a year by USDA's Statistical Reporting Service, is distributed free to crop and livestock reporters in connection with their work. Contents of the magazine may be reprinted without permission. The Secretary of Agriculture has determined that the publication of this periodical is necessary in the transaction of the public business required by law of this Department. Use of funds for printing this periodical has been approved by the Director of the Office of Management and Budget through January 31, 1979. Subscription price \$5.00 a year (\$6.25 foreign). Order from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Single copies available from the SRS Information Staff, Rm. 5855-South, USDA, Washington, D.C. 20250.

U.S. DEPARTMENT OF AGRICULTURE
STATISTICAL REPORTING SERVICE
WASHINGTON, D.C. 20250

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE \$300

To stop mailing ☐ or to change your
address ☐ send mailing label on
this magazine and new address to
the SRS office for your State.

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF
AGRICULTURE
AGR 101
BULK THIRD CLASS

